AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS

1-6 (Cancelled)

7. (Allowed) A computerized method for authenticating an electronic file, the method comprising the steps of:

receiving an electronic file having a graphical content;

generating an object level representation of the graphical content;

adding authentication information to the electronic file based on the object level representation of the graphical content, wherein the graphical content contains one bit per pixel values; and

authenticating the object level representation with a text authentication algorithm.

8. (Allowed) A computerized method for authenticating an electronic file, the method comprising the steps of:

receiving an electronic file having a graphical content;

generating an object level representation of the graphical content;

adding authentication information to the electronic file based on the object level representation of the graphical content, wherein the graphical content contains one bit per pixel values;

authenticating the object level representation with a text authentication algorithm; and

authenticating the object level representation with a checksum.

9. (Allowed) A computerized method for authenticating an electronic file, the method comprising the steps of:

receiving an electronic file having a graphical content;

generating an object level representation of the graphical content;

adding authentication information to the electronic file based on the object level representation of the graphical content, wherein the graphical content contains one bit per pixel values;

authenticating the object level representation with a text authentication algorithm; and

authenticating the object level representation with a checksum, wherein the checksum is a two-dimensional checksum.

10. (Allowed) A computerized method for authenticating an electronic file, the method comprising the steps of:

receiving an electronic file having a graphical content;

generating an object level representation of the graphical content;

adding authentication information to the electronic file based on the object level representation of the graphical content, wherein the graphical content contains one bit per pixel values;

authenticating the object level representation with a text authentication algorithm; and

authenticating the object level representation with a checksum, wherein the checksum is a multi-dimensional checksum.

11. (Allowed) A computerized method for authenticating an electronic file, the method comprising the steps of:

receiving an electronic file having a graphical content;

generating an object level representation of the graphical content;

adding authentication information to the electronic file based on the object level representation of the graphical content, wherein the graphical content contains one bit per pixel values;

authenticating the object level representation with a text authentication algorithm; and

authenticating the object level representation with a cryptographic hash function.

12-13. (Cancelled)

14. (Allowed) A computerized method for authenticating an electronic file, the method comprising the steps of:

receiving an electronic file having a graphical content;

generating an object level representation of the graphical content;

adding authentication information to the electronic file based on the object level representation of the graphical content, wherein the graphical content contains one bit per pixel values;

authenticating the graphical content at a pixel level; and

adding visible authentication information to the graphical content, wherein the visible authentication information includes a bounding box.

15. (Allowed) A computerized method for authenticating an electronic file, the method comprising the steps of:

receiving an electronic file having a graphical content;

generating an object level representation of the graphical content;

adding authentication information to the electronic file based on the object level representation of the graphical content, wherein the graphical content contains one bit per pixel values;

authenticating the graphical content at a pixel level; and

adding visible authentication information to the graphical content, wherein the visible authentication information includes a bar code.

16-19. (Cancelled)

20. (Allowed) A computerized method for authenticating a binary graph, the method comprising the steps of:

authenticating the graph at a pixel level;

authenticating the graph at an object level;

encrypting the authenticated graph;

transmitting the authenticated graph to a recipient;

adding visible authentication information to the graph; and

forming a truncated image from the graph;

generating an initial message from the truncated image, the initial message defined by all bits of the truncated image;

converting the initial message into a padded message, the padded message having a size defined by a multiple of a predetermined length;

computing a hash value for the padded message;

converting the hash value into a public key encrypted message; and

converting the public key encrypted message into the visible authentication information.

21. (Allowed) A computerized method for authenticating a binary graph, the method comprising the steps of:

authenticating the graph at a pixel level;

authenticating the graph at an object level;

encrypting the authenticated graph;

transmitting the authenticated graph to a recipient;

adding visible authentication information to the graph; and

forming a truncated image from the graph;

generating an initial message from the truncated image, the initial message defined by all bits of the truncated image;

converting the initial message into a padded message, the padded message having a size defined by a multiple of a predetermined length;

computing a hash value for the padded message;

converting the hash value into a public key encrypted message; and

converting the public key encrypted message into the visible authentication information, wherein the visible authentication information includes a bounding box.

22. (Allowed) A computerized method for authenticating a binary graph, the method comprising the steps of:

authenticating the graph at a pixel level;

authenticating the graph at an object level;

encrypting the authenticated graph;

transmitting the authenticated graph to a recipient;

adding visible authentication information to the graph; and

forming a truncated image from the graph;

generating an initial message from the truncated image, the initial message defined by all bits of the truncated image;

converting the initial message into a padded message, the padded message having a size defined by a multiple of a predetermined length;

computing a hash value for the padded message;

converting the hash value into a public key encrypted message; and

converting the public key encrypted message into the visible authentication information, wherein the visible authentication information includes a bar code.

23. (Cancelled)

24. (Allowed) A computerized method for authenticating a binary graph, the method comprising the steps of:

authenticating the graph at a pixel level;

authenticating the graph at an object level;

encrypting the authenticated graph;

transmitting the authenticated graph to a recipient;

adding invisible authentication information to the graph;

forming a truncated image from the graph;

selecting a verification bit from each pixel of the truncated image;

generating an initial message from the truncated image, the initial message defined by all non-verification bits of the truncated image;

converting the initial message into a padded message, the padded message having a size defined by a multiple of a predetermined length;

computing a hash value for the padded message;

converting the hash value into a public key encrypted message; and

embedding the public key encrypted message into the truncated image.

25. (Allowed) A computerized method for authenticating a binary graph, the method comprising the steps of:

authenticating the graph at a pixel level;

authenticating the graph at an object level;

encrypting the authenticated graph;

transmitting the authenticated graph to a recipient;

adding invisible authentication information to the graph;

forming a truncated image from the graph;

selecting a verification bit from each pixel of the truncated image;

generating an initial message from the truncated image, the initial message defined by all non-verification bits of the truncated image;

converting the initial message into a padded message, the padded message having a size defined by a multiple of a predetermined length;

computing a hash value for the padded message;

converting the hash value into a public key encrypted message;

embedding the public key encrypted message into the truncated image; and

maximizing spread between the verification bits.

26. (Allowed) A computerized method for authenticating a binary graph, the method comprising the steps of:

authenticating the graph at a pixel level;

authenticating the graph at an object level;

encrypting the authenticated graph;

transmitting the authenticated graph to a recipient; and

authenticating a symbolic representation of the graph with a text authentication algorithm.

27. (Allowed) A computerized method for authenticating a binary graph, the method comprising the steps of:

authenticating the graph at a pixel level;

authenticating the graph at an object level;

encrypting the authenticated graph;

transmitting the authenticated graph to a recipient;

authenticating a symbolic representation of the graph with a text authentication algorithm;

defining nodes of the graph with specification symbols; and

defining relationships between the nodes of the graph with relationship symbols.

28. (Allowed) A computerized method for authenticating a binary graph, the method comprising the steps of:

authenticating the graph at a pixel level;

authenticating the graph at an object level;

encrypting the authenticated graph;

transmitting the authenticated graph to a recipient;

authenticating a symbolic representation of the graph with a text authentication algorithm; and

coalescing the object level of the graph with the pixel level of the graph.

29-33. (Cancelled)